

[illegible]

liberal arts natural languages philosophies

□□□□□□ AlphaGo □□□□□

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Deepmind [4]

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AlphaGo Zero 10000 AlphaGo Master 10000 AlphaGo Zero 10000000[5] 1000000
AlphaGo Master 10000000000 16 1000000 AlphaGo Zero 10000000000 18 1000000
AlphaGo Zero 100 14 16 100 45 1000000000000000

1 Nature Magazine AlphaGo Deepmind AlphaGo Zero
AlphaGo Master

2) AlphaGo Zero local trap
AlphaGo Zero Superhuman

[AlphaGo Zero](#) [AlphaGo Master](#) [AlphaGo Master](#) [AlphaGo Master](#) [6] [Nature Magazine](#) [AlphaGo Zero paper](#) [AlphaGo Master](#) [deep-learning](#)

AlphaGo Zero AlphaGo Master AlphaGo Master

AlphaGo Zero [7] game

Superhuman
Clock IBM S/360
AlphaGo Zero superhuman IBM S/360
AlphaGo Zero Nature Magazine AlphaGo Zero paper
superhuman

superhuman Technological Singularity
Demis Hassabis AlphaGo

AlphaGo Deepmind team
AlphaGo

AlphaGo

AlphaGo Zero superhuman [8]
superhuman
superhuman deep-learning reinforcement superhuman
deep-learning reinforcement superhuman

AlphaGo Zero 与 AlphaGo Master 的
AlphaGo Master 与 superhuman 的
AlphaGo Master 与 60 个
AlphaGo Master 与 superhuman 的
AlphaGo Zero 与 superhuman 的

AlphaGo

Turing Machine → deep-learning → AlphaGo → AlphaGo Zero → AlphaGo Master

Deep-learning credit reinforcement
local trap AlphaGo

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`[0]`

[1]

[illegible][illegible]

Turing Machine
 Turing Machine local trap Universal approximation

Socratic method

[illegible]

Alan Turing, Geoffrey Hinton, Demis Hassabis, AlphaGo

Demis Hassabis and AlphaGo [13] and Geoffrey Hinton

Turing Machine and Geoffrey Hinton Turing Machine Alan Turing

Dialogue Concerning the Two Chief World Systems [14] Socratic method [15]

The Sceptical of Chemist

On the Origin of Species

[16]

[17]

Leukotomy BRIAN Initiative

Leukotomy

1 personalities mental diseases personalities BRAIN Initiative project

2 leukotomy Leukotomy BRAIN Initiative AlphaGo

3 personality intelligence Walter Freeman personality intelligence

BRAIN Initiative project NIH BRAIN 2025 Report “there is general agreement that types can be defined provisionally by invariant and generally intrinsic properties” invariant agreement

insights“envision an integrated, systematic census of neuronal and glial cell types”dynamic brain mapping “Link brain activity to behavior”“Produce conceptual foundations for understanding the biological basis of mental processes”mental processes behavior

BRAIN Initiative project personality intelligence brain mapping personality intelligence hidden assumptions

personality intelligence

BRAIN Initiative project brain mapping mental diseases personality intelligence leukotomy

leukotomy AlphaGo

personality intelligence mental diseases

BRAIN Initiative brain mapping human level intelligence personalities intelligence mental diseases BRAIN Initiative neurosciences AlphaGo generic human intelligence AlphaGo neurosciences [18]

AlphaGo Master AlphaGo Zero AlphaGo Zero AlphaGo AlphaGo Master AlphaGo

AlphaGo

Technological Singularity BRAIN Initiative project Technological Singularity baseless

AlphaGo Zero achieved superhuman performance Demis Hassabis AlphaGo

[1] AI A Modern Approach “Aristotle... was the first to formulate a precise set of laws governing the rational part of the mind.” precise AI

AlphaGo Zero Nature paper AI AlphaGo Zero human intelligence

[2] [Technological Singularity](#) [AlphaGo Zero](#) [superhuman](#)

[illegible]

Gödel's theorems suggest metaphysics from humans may not work

[illegible]

1830

[illegible][illegible][illegible]

[4] 谷歌 Deep Blue 围棋人工智能 AlphaGo 击败人类世界冠军 AlphaGo 围棋人工智能

[5] [] <http://www.alphago-games.com/>[]AlphaGo Zero [] AlphaGo Zero [][][][]
[] [] <https://www.101weigi.com/chessbook/player/38348/>[] [] [] []

[6] AlphaGo Master [6] AlphaGo Master [6] AlphaGo Master [6] AlphaGo Master [6] AlphaGo Master
[6] AlphaGo Master [6] AlphaGo Master [6] AlphaGo Master [6] AlphaGo Master [6] AlphaGo Master

[7] superhuman AlphaGo

Turing Machine \rightarrow limitation
 AlphaGo \rightarrow \rightarrow AlphaGo \rightarrow

[illegible]

AlphaGo 围棋人工智能系统，由 Google DeepMind 开发，于 2016 年 3 月 9 日在首尔举行的“人机大战”中，以 4:1 的比分战胜了世界围棋冠军李世石。AlphaGo 的胜利标志着人工智能在围棋领域取得了重大突破，也引发了关于人工智能未来发展的广泛讨论。

AlphaGo 是 Google 开发的 AlphaGo Zero 是 AlphaGo 的升级版，达到了人类水平的人工智能。AlphaGo 是 Google 开发的 AlphaGo Zero 是 AlphaGo 的升级版，达到了人类水平的人工智能。

Google/Deepmind AlphaGo

[8] <http://www.alphago-games.com/> Full Strength of AlphaGo Zero, i.e. Final Form 40 Blocks 20 Blocks Not Full Strength of AlphaGo Zero AlphaGo Zero superhuman

[9] 2012

[10] [redacted]: "Go gaming is strictly defined within a very small space. Industrial automations are typically designed in well controlled environments, but not strictly defined. Car driving is regulated, but the environment is not well controlled" [redacted]
[redacted]

[11] □□□
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AlphaGo 2016

[14] Dialogue Concerning the Two Chief Word Systems 对话篇 Socratic Method
苏格拉底方法

[illegible]

[15] AlphaGo 战胜人类围棋冠军 Lee Sedol 的比赛视频
AlphaGo 战胜人类围棋冠军 Lee Sedol 的比赛视频

[16] Leukotomy [BRAIN Initiative project](#) [BRIAN Initiative](#)

[17] [I do not cross the boundary between sciences and religions; Gödel's theorems suggest metaphysics from humans may not work](#)

[I do not cross the boundary between sciences and religions; Gödel's theorems suggest metaphysics from humans may not work](#)

[I do not cross the boundary between sciences and religions; Gödel's theorems suggest metaphysics from humans may not work](#)

[I do not cross the boundary between sciences and religions; Gödel's theorems suggest metaphysics from humans may not work](#)

[18] [AlphaGo](#)